# Annual Report
## Of
# The Royal Botanic Garden
# Calcutta

1890 – 1891

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# ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN, CALCUTTA, FOR THE YEAR 1890-91.

No. 15G, dated Seebpore near Calcutta, the 20th May 1891.

From—BRIGADE-SURGEON GEORGE KING, M.B., LL.D., F.R.S., C.I.E., Superintendent, Royal Botanic Garden, Calcutta,

To—The Secretary to the Government of Bengal, Financial Department.

I HAVE the honour to submit herewith the one hundred and fourth Annual Report of the Royal Botanic Garden.

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## ANNUAL REPORT OF THE ROYAL BOTANIC GARDEN, CALCUTTA, FOR THE YEAR 1890-91.

As regards outdoor operations in the garden, there is but little that is of general interest to report for the year. One of the main driving roads leading from the Howrah gate was—thanks to a special grant of money made by Government for the purpose—put into excellent repair. The road round the great banyan tree was moved further out from the tree, and a new approach to the tree from the north was aligned and metalled; while the levels of the whole neighbourhood of the tree were improved, so that rain-water may in future drain freely off. The condition of many of the other driving roads within the garden is far from good, and the efforts of the outdoor staff must for some time be directed to their improvement as far as the funds at my disposal may admit. A good deal of damage was done to the parts of the garden near the river by the unusually high tides which prevailed for three days towards the end of the rains. Weak points in the embankment along the river have since been strengthened, and low places have been heightened, so as to prevent the recurrence of similar mischief in future years. The Department of Public Works having during the year completed the wire fence along the whole of the garden boundary not previously defined by a wall, the encroachments of unscrupulous outside cultivators and others have, it is to be hoped, been put an end to for ever. The condition of the conservatories is satisfactory, and the health of the plants cultivated in them leaves little to be desired. The collection of orchids, which is grown in one of them, bloomed with special luxuriance this season, the display of flower eclipsing even that of the previous year.

2. *Economic plants.*—Much attention has as usual been given to the cultivation and distribution of plants of economic interest. No new introduction of importance was, however, made during the year.

3. *Herbarium.*—Work in the herbarium was as active as usual, the whole of Dr. Prain's time and a large portion of my own having been devoted to it. The accessions of new specimens during the year have been of such importance that I give a list of them as an appendix. From this list it will be seen that these accessions considerably exceeded 20,000, and that no fewer than 6,311 of these were sent from the Royal Herbarium at Kew, thus deepening the debt which the Calcutta collection already owes to that great national institution. The Royal Garden of St. Petersburgh also contributed 1,150 specimens, chiefly collected by the Central Asian explorers Przewalski and Potanin. Mr. G. Mann, Conservator of Forests in Assam, contributed no less than 1,284 specimens, chiefly consisting of bamboos and Magnoliaceæ which, after having been named, shall be distributed (according to Mr. Mann's desire) to the great herbaria in Europe. Other Forest officers who contributed during the year are—Mr. Lace, who sent a beautiful suite of 450 Beluchistan plants; Mr. Gamble, who sent 83 critical species; and Mr. Curtis of the Penang Forest Department, who sent 395 very interesting species. From the Botanic Gardens at Melbourne the indefatigable veteran, Baron Von Muller, F.R.S., contributed no less than 761 species; while Mr. Ridley of the Singapore garden sent 845. To General Collett, C.B., we are indebted for 304 critical plants from the Khasia Hills; to General Gatacre for 127 species from the Shan States in Burma; to Mr. S. Peal

for 210 specimens from Sibsagar, Assam; and to Mr. L. Wray, junior, for 853 from Perak. By collectors working directly under the agency of the garden, 6,783 specimens were brought in. Chief amongst these are 1,288 brought by Dr. Prain as the result of his exploration of the Great Coco Island; and about 1,800 collected in the Andamans under the direction of Mr. E. H. Man. Mr. Gammie, junior, sent 585 from Sikkim; while my own journeys to the Andamans and Khasia Hills yielded 960. On the other hand, 4,229 specimens (all carefully named) were issued to the principal herbaria in Europe.

4. *Botanical collections in Burma and Assam.*—As stated in my last annual report, the Government of India now gives an annual grant of Rs. 1,000 for the botanical exploration of the provinces of Burma and Assam; while the Governments concerned make similar grants, and also give facilities for collecting. During the year full advantage was taken of these arrangements so far as funds would admit; and, as a result, I visited Assam so as to organise collecting operations in that province. With the kind assistance of the late lamented Chief Commissioner (Mr. Quinton) and of Mr. Mann, Conservator of Forests, arrangements for employing native collectors were made which have already borne fruit. I also visited the Andamans where, by the extreme kindness of the Chief Commissioner, Colonel T. Cadell, V.C., and the friendly help of Mr. E. H. Man, I was enabled not only to make collections myself, but to arrange for the continuation of the work by Burmese. By the kind permission of Captain Hoskyns, R.N., of Her Majesty's surveying ship *Investigator*, Dr. Prain (Curator of the Herbarium) was not only allowed to accompany that vessel during part of her operations in the Bay of Bengal; but, by a special arrangement also made by the kindness of Captain Hoskyns, Dr. Prain was put down a second time on the Great Coco Island for a few days, and was also enabled to pay short visits to the Little Coco and to Rutland islands. Except for the visit made by Dr. Prain under similar circumstances last year, the Great Coco had not previously been explored by a botanist, and the Little Coco and Rutland islands were this year visited for the first time. Accounts of these visits will in due time be published by Dr. Prain. A Eurasian collector, named Prazer, was subsidised as a collector in Cachar and the Chindwin valley; while a Mussalman collector, named Abdool Hok, was sent from the garden to the Shan Hills in Upper Burma. Both of these men did fairly good work. Dr. Leslie was also kind enough to arrange for collections being made at some of the frontier stations in Burma. By the kind permission of Colonel Woodthorpe, C.B. (the Chief of the Intelligence Department), Lieutenant Colomb of that Department was so good as to look after a collector in a journey which he made at the base of the Eastern Himalaya, and some very interesting specimens were thus added to the herbarium.

5. *Publications.*—During the year the bulk of the material which is to be published in the third volume of the Garden Annals was prepared. That volume is to contain four memoirs. The first of these, on Indian species of *Pedicularis* by Dr. Prain, was (as stated in my last report) prepared during the previous year. The third memoir, on the genus *Gomphostemma*, also by Dr. Prain, and the second and fourth by myself, on Indian *Magnoliaceæ* and on Indo-Malayan species of *Myristica*, were elaborated during the year under review. Owing to unavoidable delays, it has not been possible to issue the volume within the year, but its publication will not much longer be delayed. Dr. Prain has contributed to the journal of the Asiatic Society a paper on a new species of *Ellipanthus*, also a second and much longer paper on Indian *Labiatæ*, in which 46 species (23 of which are new to science) are added (as the result of recent exploration) to the Flora of British India. Parts 1 and 2 of a series of papers by myself on the Malayan Flora have also been contributed to the journal just mentioned.

6. *Library.*—The work of rebinding the library has been continued during the year. A few new books have been acquired by purchase; while, from the Director of the Royal Garden at Kew, there have been received a large number of books—some of them of very great interest—withdrawn as duplicates from the library of that noble institution.

7. *Interchange of plants and seeds.*—The distribution lists attached as appendices to this report show that, during the year, 18,816 plants were received

and that 55,204 were distributed ; while of seeds 1,714 packets were received and 3,132 were issued. As usual, the recipients both of plants and seeds were mostly public officers.

8. *Lloyd Botanic Garden, Darjeeling.*—This branch garden was throughout the year under the charge of Mr. W. A. Kennedy, its Curator. The garden, which I recently inspected, is in very good order. In addition to his work in the garden itself, Mr. Kennedy is charged with the difficult task of planting and conserving trees in the barest and ugliest spots within the station, and especially in the bazar. Such trees have to be protected for years, not only from the ravages of goats and cattle, but from the recklessness of passing Nepalese and Bhutias, who seem to delight in trying newly-purchased kookries and dahs on the slender stems of these unfortunate nurslings.

9. The sums provided in the budget for the maintenance of the gardens both at Calcutta and Darjeeling were spent in full; and the estimated revenue was, with the exception of a few rupees, realised in both.

10. The Library and Herbarium were during the year in charge of Dr. Prain, whose zeal and devotion are beyond any praise of mine. I have here to acknowledge the kind assistance invariably given when asked for by the authorities at Kew, and especially by Mr. W. Botting Hemsley, F.R.S, when (as not unfrequently happens) knotty botanical points are submitted to them for solution. Mr. McHardy, recently Curator of the garden, resigned during the year, and his place was taken by Mr. R. L Proudlock, who has worked with much energy and intelligence. For a few months, Mr. A. C. Hartless, of the Cinchona Plantation, was brought down to give assistance; but on the arrival from Kew of a new Assistant Curator in the person of Mr. G. T. Lane, Mr. Hartless returned to Mungpoo. During his spell of service here, Mr. Hartless did excellent work. My office staff have worked well, and my acknowledgments are particularly due to the head of the office, Babu Gopal Chunder Datta.

11. Five appendices are attached which show the issues and receipts of seeds and plants, and the receipts of specimens in the Herbarium.

## APPENDIX I.

*Statement showing plants received from 1st April 1890 to 31st March 1891.*

| FROM WHOM RECEIVED. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| Royal Garden, Kew, London ... ... | 5 | 2 | 221 |
| Royal Botanic Garden, Edinburgh ... | ... | 1 | 21 |
| Ditto, Peradeniya, Ceylon ... | 2 | ... | 85 |
| Botanic Garden, Singapore ... ... | 1 | 2 | 171 |
| Ditto, Ootacamund ... ... | ... | 1 | 314 |
| Ditto, Saharanpur ... ... | ... | 2 | 1,741 |
| Ditto, Darjeeling ... ... | ... | 20 | 282 |
| Ditto, Bangalore ... ... | 1 | 4 | 899 |
| Memorial Garden, Cawnpore ... ... | ... | 1 | 5 |
| Belvedere Garden, Alipore ... ... | ... | ... | 12 |
| Agri-Horticultural Society, Calcutta ... | ... | 4 | 198 |
| Ditto, Lahore ... | ... | 3 | 52 |
| Ditto, Madras ... | ... | 1 | 1,000 |
| Horticultural Garden, Lucknow ... ... | ... | 1 | 30 |
| Municipal Garden, Bombay ... .. | ... | 1 | 1,000 |
| La Martinière School, Calcutta ... ... | .. | ... | 7 |
| Chief Commissioner, Andamans ... ... | 5 | ... | 357 |
| Revenue and Agricultural Department, Simla | ... | . | 115 |
| Deputy Postmaster-General, Lucknow ... | . . | 1 | 367 |
| G. W. Bartlett, Esq., Calcutta ... ... | ... | ... | 4 |
| Mrs. A Betts, Calcutta ... ... | ... | ... | 25 |
| General H. Collett, C.B., Shillong ... ... | ... | 2 | 91 |
| Dr. D. D. Cunningham, F.R.S., Calcutta ... | ... | ... | 32 |
| C. Curtis, Esq , Penang ... ... | ... | 3 | 150 |
| Mrs. Fishe, Barrackpore ... ... | ... | ... | 4 |
| G. Gammie, Esq., Mungpoo ... ... | .. | 5 | 389 |
| W. Goss, Esq., Jalpaiguri ... ... | ... | 1 | 59 |
| Dr. Griffiths, Allahabad ... ... | ... | 1 | 10 |
| J. L. Lister, Esq., Nimbong ... ... | ... | 1 | 289 |
| G. Mann, Esq., Shillong ... ... | ... | 14 | 4,342 |
| C. Maries, Esq., Gwalior ... ... | ... | 17 | 2,711 |
| J. Parkes, Esq , Bhootan ... ... | ... | 12 | 690 |
| G. McD. Peche, Esq., Moulmein ... | ... | 7 | 918 |
| Dr. C. J. Simons, Assam ... ... | ... | 3 | 89 |
| A. Simson, Esq., Calcutta ... ... | ... | ... | 3 |
| E. Trelawny, Esq., Calcutta ... .. | ... | ... | 1 |
| Colonel Waterhouse, Calcutta ... ... | ... | ... | 86 |
| Collected by Dr. G. King, Khasia Hills and Andamans ... ... ... | ... | ... | 52 |
| Collected by Dr. D. Prain, Great Coco Island ... | ... | ... | 67 |
| Ditto Mr. R. L Proudlock, Mungpoo ... | ... | ... | 65 |
| Ditto Badul Khan, Plant Collector, Assam | ... | 2 | 122 |
| Ditto Abdool Hok, ditto, Burma | ... | 6 | 761 |
| Babu S. P. Chatterjee, Calcutta ... ... | ... | 5 | 944 |
| Unknown donors ... ... ... | ... | 2 | 35 |
| Total ... | 14 | 125 | 18,816 |

## APPENDIX II.

*Statement showing plants sent out from 1st April 1890 to 31st March 1891.*

| TO WHOM SENT. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| Government House Garden, Calcutta ... | ... | ... | 23 |
| Belvedere Garden, Alipore ... ... | ... | ... | 21 |
| The Representative of the Government of Nepal | ... | 4 | 31 |
| The Hon'ble Nawab Asanullah Khan Bahadoor, C.I.E., Dacca ... ... | ... | 10 | 87 |
| Royal Garden, Kew, London ... ... | ... | 2 | 56 |
| Royal Botanic Garden, Peradeniya, Ceylon ... | 1 | ... | 40 |

## APPENDIX II—*continued.*

| To whom sent. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| Botanic Garden, Saharanpur ... ... | ... | 18 | 380 |
| Ditto, Darjeeling ... ... | ... | 2 | 65 |
| Zoological Garden, Alipore ... ... | ... | ... | 88 |
| Horticultural Garden, Lucknow ... ... | ... | 2 | 30 |
| Agri-Horticultural Garden, Lahore ... | ... | 17 | 229 |
| Ditto, Calcutta ... | ... | ... | 61 |
| Sir George Macleay, Surrey ... ... | 1 | ... | 8 |
| Political Agent, Jeypore, Rajputana ... | ... | 4 | 107 |
| Conservator of Forests, Sunderbuns ... | ... | ... | 112 |
| Superintendent of Forests, Penang ... | 2 | ... | 54 |
| Forest Officer, Katikoond ... ... | ... | 7 | 135 |
| Port Officer, Calcutta ... ... | ... | ... | 52 |
| Officer Commanding the Garrison, Changsil ... | ... | 2 | 76 |
| Chief Commissioner, Andamans ... ... | 2 | 14 | 390 |
| Commissioner of Orissa ... ... | ... | 4 | 100 |
| Ditto Burdwan ... ... | ... | ... | 25 |
| Deputy Commissioner of Hazaribagh ... | ... | 2 | 40 |
| Subdivisional Officer, Feni ... ... | ... | 2 | 20 |
| Ditto, Pakur ... ... | ... | 11 | 238 |
| Ditto, Deoghur ... ... | ... | 6 | 121 |
| Ditto, Rajmehal ... ... | ... | 8 | 180 |
| Ditto, Naraingunge | ... | 2 | 35 |
| Covenanted Deputy Collector in charge, Chittagong ... ... ... ... | ... | 3 | 50 |
| Settlement Officer, Western Duars ... | ... | 34 | 440 |
| Secretary, District Board, Sarun ... .. | ... | 8 | 210 |
| Chairman, District Board, Noakhally ... | ... | 31 | 691 |
| Ditto, Pooree ... | ... | 2 | 37 |
| Ditto, Furreedpore ... | ... | 10 | 200 |
| Ditto, Tipperah ... | ... | 23 | 570 |
| Ditto, Dinajpur ... | ... | 8 | 198 |
| Chairman, Local Board, Samastipur ... | ... | 6 | 135 |
| Ditto, Jessore Municipality ... ... | ... | 5 | 104 |
| Ditto, Khulna Municipality ... ... | ... | 4 | 90 |
| Ditto, Kumarkhali Municipality ... | ... | 1 | 21 |
| Vice-Chairman, Jamalpur Municipality ... | ... | 7 | 135 |
| Ditto, Murshidabad Municipality ... | ... | 2 | 50 |
| District Engineer, Khulna ... ... | ... | 5 | 105 |
| Ditto, Jalpaiguri ... ... | ... | 5 | 105 |
| Ditto, Backergunge ... ... | ... | 25 | 470 |
| Ditto, Patna ... ... | ... | 28 | 575 |
| Ditto, Lohardugga ... ... | ... | 14 | 345 |
| Ditto, Beerbhoom ... .. | ... | 2 | 37 |
| Ditto, Midnapore ... ... | ... | ... | 1,000 |
| Ditto, Bhagalpur ... ... | ... | 17 | 400 |
| Executive Engineer, Buxar Division ... | ... | 92 | 2,000 |
| Superintendent, Foundry and Shell Factory, Cossipore ... ... ... | ... | ... | 148 |
| Superintendent, Calcutta Workshop Division ... | ... | ... | 252 |
| Ditto, Presidency Jail, Calcutta ... | ... | ... | 1,640 |
| Ditto, Tura Jail, Assam ... | ... | 5 | 72 |
| Ditto, Jalpaiguri Jail ... ... | ... | 2 | 23 |
| Ditto, Alipore Jail ... ... | ... | ... | 401 |
| Ditto, Hazaribagh Jail ... ... | ... | 1 | 50 |
| Ditto, Midnapore Jail ... ... | ... | ... | 670 |
| Ditto, Victoria Garden, Bombay ... | 1 | ... | 30 |
| Ditto, Lal Bagh, Bangalore ... | 1 | 1 | 40 |
| Manager, Mookhamcherra Tea Estate ... | ... | 1 | 160 |
| Ditto, Jute Mills, Seebpore ... ... | ... | ... | 360 |
| Surveyor-General, Calcutta ... ... | ... | ... | 35 |
| Deputy Postmaster-General, Lucknow ... | ... | 2 | 44 |
| The Master of the Mint, Calcutta ... | ... | ... | 76 |
| Howrah Hospital ... ... ... | ... | ... | 3,042 |
| Medical College Hospital, Calcutta ... | ... | ... | 100 |
| Principal, Medical College, Calcutta ... | ... | ... | 10 |
| Reformatory School, Alipore ... ... | ... | ... | 100 |
| La Martinière School, Calcutta ... ... | ... | ... | 29 |
| Christ Church Parsonage, Calcutta ... | ... | ... | 150 |
| St. John's Church, Calcutta ... ... | ... | ... | 386 |

## APPENDIX II—*continued.*

| To whom sent. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| Howrah Church ... ... ... | ... | ... | 12 |
| Protestant Home, Calcutta ... ... | ... | ... | 12 |
| Indian Museum, Calcutta ... ... | ... | ... | 12 |
| Leper Asylum, Calcutta ... ... | ... | ... | 100 |
| Assistant Registrar, Calcutta University ... | ... | ... | 24 |
| Board of Revenue, Calcutta ... ... | ... | ... | 200 |
| Soldiers' Gardens, Fort William ... ... | ... | ... | 4,184 |
| E. I. Railway, Howrah ... ... | ... | ... | 2,400 |
| E. B. State Railway, Sealdah ... ... | ... | 80 | 2,000 |
| Barrackpore Park ... ... ... | ... | ... | 68 |
| Sulkeah Salt Golah ... ... ... | ... | ... | 1,792 |
| Bazar of the Little Sisters of the Poor ... | ... | ... | 125 |
| Bengal Mills, Garden Reach ... ... | ... | ... | 26 |
| Women's Charitable Society, Calcutta ... | ... | ... | 20 |
| Women's Friendly Society, Calcutta ... | ... | ... | 312 |
| Fancy Bazar for ditto ditto ... | ... | ... | 50 |
| The Hon'ble Sir Alfred Croft, K.C.I.E., Calcutta | ... | ... | 6 |
| Hon'ble C. B. Garrett, Calcutta ... ... | ... | ... | 202 |
| W. B. Bliss, Esq., Calcutta ... ... | ... | ... | 1 |
| Mrs. Apcar, Calcutta ... ... | ... | ... | 67 |
| T. J. Ayres, Esq , Howrah ... ... | ... | ... | 72 |
| H. Bahr, Esq., Assam ... ... | ... | 8 | 138 |
| Lady Barbour, Calcutta ... ... | ... | ... | 2 |
| J. Benson, Esq., Seebpore ... ... | ... | ... | 109 |
| Mrs. A. Betts, Calcutta ... ... | ... | ... | 38 |
| Dr. S. Borah, Tezpur ... ... | ... | 2 | 30 |
| Mrs. Brühl, Engineering College ... ... | ... | ... | 38 |
| R. Clare, Esq., Calcutta ... ... | ... | ... | 100 |
| W. B. Colville, Esq., Ballygunge ... ... | ... | ... | 33 |
| H. Cockell, Esq., Motiharry ... ... | ... | ... | 63 |
| H. Cowasji, Esq., Calcutta ... ... | ... | ... | 9 |
| Dr. D. D. Cunningham, Calcutta ... ... | ... | ... | 39 |
| Mrs. Day, Calcutta ... ... | ... | ... | 205 |
| ,, H. Doran, Howrah ... ... | ... | ... | 8 |
| J. N. Eaton, Esq , Chakradharpore ... | ... | 53 | 1,300 |
| Sir John Edgar, K.C.I.E., Calcutta ... | ... | ... | 63 |
| Captain Edge, S. S. *Peshwa* ... ... | ... | ... | 12 |
| Mrs. Fiddian, Howrah ... ... | ... | ... | 206 |
| J. Fleming, Esq , Calcutta ... ... | ... | ... | 220 |
| G. Denison Foldger, Esq. ... ... | ... | 3 | 34 |
| J. Gammie, Esq , Mungpoo ... ... | ... | 2 | 611 |
| W. Graham, Esq., Calcutta ... ... | ... | ... | 30 |
| Dr. Griffiths, Allahabad ... ... | ... | 3 | 47 |
| T. Grant, Esq , Sainthia ... ... | ... | 1 | 15 |
| Captain Gray, S. S. *City of Canterbury* .. | ... | ... | 16 |
| W. Goss, Esq., Rangamati ... ... | ... | 5 | 121 |
| W. M. St. Clair Grant, Esq., Bhagalpur ... | ... | 4 | 100 |
| A. M. Gasper, Esq., Moradabad ... ... | ... | 1 | 9 |
| G. B. Groves, Esq., Dacca ... ... | ... | 3 | 34 |
| H. E. Houghton, Esq., Dharwar ... ... | ... | 1 | 15 |
| J. D. Kohus, Esq., Java ... ... | 1 | ... | 40 |
| Mr. R. A. Lyall, Calcutta ... ... | ... | 2 | 1,429 |
| Captain Longworthy, S. S. *Abana*... ... | ... | ... | 12 |
| D. Low, Esq., P. & O. Agent, Brindisi ... | 1 | ... | 28 |
| Mrs. Mackenzie, Calcutta ... ... | ... | ... | 21 |
| E. H. Man, Esq., Andamans ... ... | 2 | ... | 91 |
| Captain Mann, S. S. *Rewa* ... ... | ... | ... | 12 |
| T. W. Man, Esq. ... ... ... | ... | ... | 1 |
| C. Maries, Esq., Gwalior ... ... | ... | 4 | 127 |
| Mrs. Maxwell, Howrah ... ... | ... | ... | 100 |
| E. F. Mondy, Esq., Calcutta ... ... | ... | ... | 297 |
| G. H. T. Mayer, Esq., Cawnpore ... ... | ... | 3 | 67 |
| Mrs. Morrison, Ghoosery ... ... | ... | ... | 1 |
| M. Nahar, Esq., Azimgunge ... ... | ... | 1 | 16 |
| A. C. Nairn, Esq., S S. *Nepal* ... ... | ... | ... | 186 |
| P. Nolan, Esq., Alipore ... ... | ... | ... | 320 |
| G. W. Noal, Esq., Seebpore ... ... | ... | ... | 150 |
| J. D. Osmers, Esq., Calcutta ... ... | ... | ... | 32 |
| Graham Peddie, Esq., Madhupur, E. I. Railway | ... | 1 | 10 |

## APPENDIX II—*continued.*

| To whom sent. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| J. Pratt, Esq , Midnapore ... ... | ... | 4 | 85 |
| R. Pantling, Esq., Mungpoo ... ... | ... | 1 | 81 |
| G. McD. Peche, Esq., Moulmein ... ... | ... | 1 | 17 |
| J. Phillips, Esq , Allahabad ... ... | ... | 15 | 294 |
| P. Playfair, Esq., Alipore ... ... | ... | ... | 6 |
| Mrs. Prain, Kurseong ... ... | ... | 10 | 347 |
| Chief Commissioner, Andamans ... ... | 1 | 2 | 68 |
| Charles Ross, Esq., Seebpore ... ... | ... | ... | 285 |
| W. Reeves, Esq., Sylhet ... ... | ... | 1 | 20 |
| — Simmons, Esq., Calcutta ... ... | ... | ... | 9 |
| Dr. Simpson, Calcutta ... ... | ... | ... | 1,527 |
| Mrs. Simpson, Calcutta ... ... | ... | ... | 6 |
| A. Simson, Esq., Calcutta ... ... | ... | ... | 15 |
| J. S. Slater, Esq., Seebpore ... ... | ... | ... | 791 |
| Charles Stiffe, Esq., Calcutta ... ... | ... | ... | 6 |
| E. Trelawny, Esq., Calcutta ... ... | ... | ... | 342 |
| Colonel R. Warburton, Peshawar ... ... | ... | 2 | 23 |
| Dr. C. J. Warden, Alipore ... ... | ... | ... | 100 |
| Colonel Waterhouse, Calcutta ... ... | ... | ... | 4 |
| T. Watson, Esq., Calcutta ... ... | ... | ... | 1 |
| Mrs. E. V. Westmacott, Calcutta ... ... | ... | ... | 1 |
| Herbert Winn, Esq., Belvedere, Chunar ... | ... | 2 | 36 |
| J. V. Woodman, Esq., Rangamati ... | ... | 1 | 8 |
| Messrs Gillanders, Arbuthnot & Co., Calcutta | ... | ... | 4,400 |
| „ Kilburn & Co., Calcutta ... ... | ... | ... | 12 |
| „ T. J. Barr & Co., Calcutta ... | ... | ... | 3,500 |
| „ F. Sander & Co., St. Albans ... | ... | 9 | 3,031 |
| River Steam Navigation Company, Limited, Garden Reach ... ... ... | ... | ... | 100 |
| Prince Nooroodeen Khan, Russapagla ... | ... | ... | 2 |
| Babu A. B. Moitra, Santipore ... ... | ... | 1 | 3 |
| „ A. C. Chowdhoory, Sulkeah... .. | ... | 2 | 16 |
| „ A. K. Bose, Belgoriah ... ... | ... | ... | 28 |
| „ A. N. Bose, Calcutta ... ... | ... | ... | 10 |
| „ A. C. Banerjee, Cossipore ... ... | ... | ... | 1 |
| „ B. M. Paramanick, Burdwan ... | ... | ... | 200 |
| „ B. B. Gangooly, Krishnagar ... | ... | 2 | 7 |
| „ B. Mookerjee, Hazaribagh ... ... | ... | 1 | 15 |
| „ B. Ghosh, Taki ... ... ... | ... | ... | 310 |
| „ D. N. Basu, Seebpore ... ... | ... | ... | 127 |
| „ D. N. Banerjee, Calcutta ... ... | ... | ... | 9 |
| „ G. C. Datta, Seebpore ... ... | ... | ... | 233 |
| „ G. C. Gupta, Calcutta ... ... | ... | ... | 11 |
| „ G. C. Barral, Krishnagar ... ... | ... | ... | 3 |
| „ J. C. Pal, Calcutta ... ... | ... | ... | 175 |
| „ J. N. Chowdhoory, Seebpore ... | ... | ... | 3 |
| „ J. C. Biswas, Calcutta ... ... | ... | ... | 503 |
| „ J. N Banerjee, Seebpore ... ... | ... | ... | 2 |
| „ J. N. Mullick, Calcutta ... ... | ... | ... | 1 |
| „ J. P. Gupta, Nashipur ... ... | ... | 1 | 6 |
| „ K. P. Nusker, Thana Makooah ... | ... | ... | 100 |
| „ K. M. Mookerjee, Calcutta ... ... | ... | ... | 16 |
| „ K. P. Chowdhoory, Seebpore ... | ... | ... | 50 |
| „ M. D. Dey, Burdwan ... ... | ... | ... | 46 |
| „ M. L. Mundul, Kidderpore ... ... | ... | ... | 100 |
| „ N. M. Bhattacherjee, Majirhat ... | ... | ... | 20 |
| „ N. L. Nusker, Thana Makooah ... | ... | ... | 100 |
| „ P. R. Maity, Nazirgunge ... ... | ... | ... | 4 |
| „ P. C. Banerjee, Ranaghat ... ... | ... | 1 | 23 |
| „ R. N. Porail, Midnapore ... ... | ... | ... | 5 |
| „ R. C. Roy, Ranchi ... ... | ... | 3 | 29 |
| „ S. C. Roy, Goneshpur ... ... | ... | ... | 6 |
| „ S. N. Roy, Calcutta ... ... | ... | ... | 10 |
| „ S. P. Chatterjee, Calcutta ... ... | ... | ... | 545 |
| Chowdhoory Mahadeo Prosad, Nanpur ... | ... | 4 | 100 |
| Sibsanker Prosad, Gya ... .. | ... | 1 | 3 |
| Soorjoo Den Narain Sing, Balegurh ... | ... | 1 | 44 |
| Hernam Dass, Garden Reach ... ... | ... | ... | 3 |
| Nonidh Roy, Mozufferpore ... ... | ... | ... | 4 |

## APPENDIX II—*concluded.*

| To whom sent. | Wardian cases. | Boxes. | Number of plants. |
|---|---|---|---|
| Nunda Kissore Dass, Gya ... ... | .. | 5 | 100 |
| Badul Khan, Ghoshpur ... ... | ... | ... | 14 |
| Shaik Gobordhun, Trishbiga ... ... | ... | ... | 175 |
| Hurry Malie, Manicktollah ... ... | ... | ... | 2 |
| Ishan Chandra Malie, Calcutta ... ... | ... | ... | 8 |
| M. S. Muntaz Ali, Saharanpur ... ... | ... | 2 | 16 |
| Morfoodul Hock, Calcutta ... ... | ... | ... | 5 |
| Musseebullah Chuprassie ... ... | ... | ... | 6 |
| Dewan Mallie, Thana Makooah ... ... | ... | ... | 43 |
| Shadir Mallie, ditto ... ... | ... | ... | 20 |
| Shaik Soobid Mallie, ditto ... ... | ... | ... | 5 |
| „ Solomon, ditto ... ... | ... | ... | 12 |
| Total ... | 13 | 710 | 55,204 |

## APPENDIX III.

*Statement showing seeds received from* 1*st April* 1890 *to* 31*st March* 1891.

| From whom received. | Number of parcels or packets. |
|---|---|
| W. T. Thiselton Dyer, Esq., F.R.S., C.M.G., Director, Royal Garden, Kew, London ... ... ... | 10 |
| Dr. Regel, Imperial Garden, St. Petersburgh, Russia ... | 111 |
| Royal Botanic Garden, Peradeniya, Ceylon ... ... | 21 |
| Botanic Garden, Trinidad ... ... ... | 10 |
| Ditto, British Guiana ... ... ... | 5 |
| Ditto, Adelaide ... ... ... | 50 |
| Ditto, Melbourne ... ... ... | 21 |
| Ditto and Domain Garden, Melbourne ... | 25 |
| Ditto, Port Darwin ... ... ... | 19 |
| Ditto, Hobart Town ... ... ... | 50 |
| Ditto, Rockhampton ... ... ... | 7 |
| Ditto, Buitenzorg, Java ... .. ... | 77 |
| Ditto, Singapore ... ... ... | 11 |
| Ditto, Mauritius ... ... ... | 9 |
| Ditto, Saharanpur ... ... ... | 28 |
| Ditto, Darjeeling ... ... ... | 742 |
| Ditto, Bangalore ... ... ... | 96 |
| Ditto, Ootacamund ... ... ... | 2 |
| George H. T. Mayer, Esq., Memorial Garden, Cawnpore ... | 1 |
| Baron Ferdinand Von Mueller, F.R.S., Melbourne, Australia ... | 10 |
| W. Anderson, Esq., Townsville, Queensland ... ... | 16 |
| F. M. Bailey, Esq., Brisbane ... ... ... | 5 |
| T. R. Cupps, Esq., Belu, Chumparun ... ... | 1 |
| Messrs. Dammann and Co., San Giovanni, Italy ... ... | 149 |
| Manager, Queensland Acclimatization Society, Brisbane ... | 12 |
| C. Curtis, Esq., Forest Department, Penang ... ... | 3 |
| Secretary to the Agri-Horticultural Society of India, Calcutta | 10 |
| Ditto ditto, Madras | 4 |
| Superintendent, Agri-Horticultural Garden, Lahore ... | 121 |
| Ditto ditto, Teynampett, Madras | 1 |
| Conservator of Forests, Northern Circle, Madras ... | 3 |
| Ditto, Burma ... ... | 5 |
| Forest Officer, Poona ... ... ... ... | 1 |
| Asiatic Society, Bengal, Calcutta ... ... ... | 1 |
| Economic Museum, Calcutta ... ... ... | 1 |
| G. Bartlett, Esq., Calcutta ... ... ... | 2 |
| J. Gammie, Esq., Mungpoo ... ... ... | 4 |
| Dr. George King ... ... ... ... | 19 |
| J. L. Lister, Esq., Kalimpong ... ... ... | 7 |
| E. H. Man, Esq., Port Blair ... ... ... | 17 |
| W. Pigot, Esq., Calcutta ... ... ... | 1 |
| Dr. David Prain, Great Coco Island ... ... ... | 4 |
| Baboo B. Ghosh, Taki ... ... ... ... | 2 |
| Munshi Abdool Hok, Plant Collector ... ... | 20 |
| Total ... | 1,714 |

# APPENDIX IV.

*Statement showing seeds distributed from the Royal Botanic Garden during the year* 1890-91.

| To whom sent. | Number of parcels or packets. |
|---|---|
| W. T. Thiselton Dyer, Esq., F.R.S., C.M.G., Director, Royal Garden, Kew, London ... ... ... | 233 |
| Sir J. D. Hooker, K.C.S.I., C.B., F.R.S, &c., The Camp, Sunningdale, London ... ... ... | 72 |
| Botanic Garden, Cambridge ... ... ... | 10 |
| Ditto, Edinburgh ... ... ... | 175 |
| Ditto, Brisbane, Queensland ... ... | 1 |
| Ditto, Adelaide ... ... ... | 1 |
| Ditto, Ballarat, Australia ... ... ... | 1 |
| Ditto, Melbourne ... ... ... | 24 |
| Ditto, Port Darwin ... ... ... | 10 |
| Ditto, Rockhampton ... ... ... | 3 |
| Ditto, Hobart Town, Tasmania ... ... | 1 |
| Ditto, Buitenzorg, Java ... ... ... | 5 |
| Ditto, Hongkong ... ... ... | 13 |
| Ditto, Trinidad ... ... ... | 6 |
| Ditto, Singapore ... ... ... | 2 |
| Ditto, Peradeniya, Ceylon ... ... | 2 |
| Ditto, Saharanpur ... ... ... | 55 |
| Ditto, Darjeeling ... ... ... | 360 |
| Ditto, Ootacamund ... ... ... | 3 |
| Ditto and Domain Garden, Melbourne... ... | 1 |
| Zoological Garden, Melbourne ... ... ... | 1 |
| Victoria Garden, Bombay ... .. ... | 2 |
| Memorial Garden, Cawnpore ... ... ... | 5 |
| Private Secretary to His Excellency the Viceroy ... ... | 76 |
| Military Secretary ditto ditto ... | 43 |
| M. Edward Guillaume, Paris ... ... ... | 31 |
| Sra. Maria de Morgans, Malaga, Spain ... ... | 40 |
| Secretary to the Agri-Horticultural Society of India, Calcutta | 3 |
| Ditto ditto, Madras | 3 |
| Superintendent, Agri-Horticultural Garden, Madras ... | 3 |
| Ditto, ditto, Lahore ... | 3 |
| Ditto, ditto, Lucknow ... | 25 |
| Ditto, Bhagalpur Jail ... ... ... | 1 |
| Ditto, Intermediate Jail, Bogra ... ... | 1 |
| Ditto, Central Jail, Midnapore ... ... | 1 |
| Ditto, Jail, Chittagong ... ... .. | 1 |
| Ditto, Jail, Maimensing ... ... ... | 2 |
| Ditto, Jail, Rungpur ... ... ... | 1 |
| Ditto, Gwalior State Garden, Gwalior ... ... | 29 |
| Sir A. J. Arbuthnot, K.C.S.I., India Office, London ... | 33 |
| Signor T. Arcangeli, Italy ... ... ... | 3 |
| C. B. S. Bosanquet, Esq., Northumberland ... ... | 28 |
| C. Curtis, Esq., Penang ... ... ... ... | 3 |
| D Picton Davies, Esq., C.E., Quetta ... ... ... | 1 |
| The Hon'ble and Revd. W. C. Ellis, Northumberland ... | 28 |
| A. Forbes, Esq., Morken, Aberdeen ... ... ... | 58 |
| Signor T. Hanbury, F.L.S., La Mortala, Italy ... ... | 148 |
| W. G. Head, Esq., Crystal Palace, London ... ... | 3 |
| Mr. Robert Hindmarsh, Northumberland ... ... | 58 |
| Joseph Hughes, Esq., Townsville, Queensland ... ... | 1 |
| James Inglis, Esq., Sydney, Australia ... ... | 4 |
| Mrs. Irvine, Drum Castle, Aberdeen ... ... ... | 25 |
| H. C. Levinge, Esq, Knockdrin Castle, Ireland ... ... | 1 |
| Baron Ferdinand Von Mueller, F.R.S., Melbourne ... ... | 1 |
| Dr. G. Niven, Didsbury, Manchester ... ... ... | 87 |
| Revd. C. M. Pakenham, Longford Lodge, Ireland ... | 2 |
| Tindal P. Porter, Esq., Brisbane, Queensland ... ... | 200 |
| David Prain, Esq., Fettercairn, Scotland ... ... | 50 |
| Colonel C. E. Stewart, Tabreez, Persia ... ... | 28 |
| W. Thomson, Esq., England ... ... ... | 49 |
| G. F. Wilson, Esq., Heatherbank, England ... ... | 117 |
| Messrs. J. C. Bachtler & Co., Allahabad ... ... | 1 |
| „ Dammann & Co., San Giovanni, Italy ... ... | 25 |
| „ Begg, Dunlop & Co., Calcutta ... ... | 3 |
| „ Hugh, Low & Co, London ... ... ... | 1 |
| „ Williamson, Magor & Co., Calcutta ... ... | 6 |
| Messrs. Stanley Price & Co, Calcutta ... ... | 172 |
| Messrs. F. Sander & Co., St. Albans, England ... ... | 8 |
| „ E. B. William and Brother, Heneratgoda, Ceylon ... | 1 |
| Extra Assistant Commissioner, Jowai, Assam ... ... | 1 |

## APPENDIX IV—*concluded.*

| To whom sent. | Number of parcels or packets. |
|---|---|
| Conservator of Forests, Northern Circle, Madras ... ... | 26 |
| District Forest Officer, South Malabar, Nilambur ... .. | 5 |
| Forest Officer in charge Chittagong Division, Chittagong ... | 88 |
| District Engineer, Rungpur ... ... ... | 1 |
| Executive Engineer, Aska, Ganjam ... ... ... | 6 |
| Officiating Collector of Purneah ... ... .. | 20 |
| Consul-General for France, Calcutta ... ... ... | 1 |
| Garrison Quarter Master, Fort William ... ... | 60 |
| General Officer Commanding, Mandalay ... ... | 53 |
| Inspector of Salt and Abkari Revenue, Ganjam ... ... | 1 |
| Political Agent, Abu, Rajputana ... ... ... | 13 |
| Political Resident, Turkish Arabia, British Residency, Bagdad ... ... ... ... | 20 |
| H. Bahr, Esq., Sonthal Colony, Dhubri ... ... | 91 |
| T. E. Carter, Esq., Dacca Railway ... ... ... | 6 |
| Captain F. O. B. Campbell, Jhansi ... ... ... | 3 |
| Dr. Cunningham, Calcutta ... ... ... | 1 |
| M. Finucane, Esq., C.S., Calcutta ... ... ... | 1 |
| J. Gammie, Esq., Mungpoo ... ... ... | 104 |
| Dr. Glynn Griffith, Allahabad ... ... ... | 1 |
| H. A. Herbert, Esq., Calcutta ... ... ... | 1 |
| Mrs. Hodges, Monywa, Chindwin ... ... ... | 25 |
| Captain Linsell, Andamans ... ... ... | 10 |
| C. P. Lloyd, Esq., The Buffs, Dum-Dum ... ... | 2 |
| James C. Kelly, Esq., Forest Department, Tezpur ... | 63 |
| D. McL. Morrison, Esq., Calcutta ... ... ... | 12 |
| T. F. Peppe, Esq., Ranchi ... ... ... | 29 |
| A. A. Philbert, Esq., Meiktila ... ... ... | 1 |
| Mrs. Prain, Kurseong ... ... ... ... | 1 |
| Colonel D. Robertson, Shillong ... ... ... | 1 |
| Captain J. G. Robinson, Dehra Dun ... ... ... | 15 |
| Lieutenant Tullock, Fort William ... ... ... | 9 |
| Thomas Wardle, Esq., Leek, England ... ... | 1 |
| Dr. C. J. H. Warden, Medical College, Calcutta ... ... | 1 |
| M. R. Weld, Esq., C.S., Kurnool ... ... ... | 52 |
| Brigadier-General Wolsley, C.B., Mandalay ... ... | 6 |
| Louis Zindug, Esq., Calcutta ... ... ... | 12 |
| Rajah Ram Narain Singh, Khaira, Jamooee ... ... | 1 |
| Babu A. C. Banerjee, L.M.S., Allahabad ... ... | 3 |
| „ N. C. Dey, Seebpore ... ... ... | 1 |
| „ N. G. Sein, Seebpore ... ... ... | 6 |
| „ P. B. Dutt, Calcutta ... ... ... | 8 |
| „ P. C. Saha, Calcutta ... ... ... | 7 |
| Munshi Ali Hosan, Chandpur ... ... ... | 18 |
| Total ... | 3,132 |

# APPENDIX V.

*List showing contributions to the Herbarium during* 1890-91.

| | | | |
|---|---|---|---|
| From Royal Herbarium, Kew— | | | |
| Dr. Henry's Chinese collection ... ... ... | | 2,532 | |
| Dr. Henry's Chinese duplicates ... ... ... | | 312 | |
| Ball's Ferns about ... ... | 600 | | |
| Monro's grasses about ... ... | 1,000 | | |
| | | 1,600 | |
| Vidal's Manilla plants ... ... ... | | 109 | |
| Burbidge's North Borneo plants ... ... | | 13 | |
| Balansa's Tonquin plants ... ... ... | | 192 | |
| Duplicates of Mr. C. B. Clarke's Herbarium ... | | 746 | |
| Duplicates of the late Dr. Wight's Herbarium ... | | 665 | |
| Duplicates from Mr. Duthie's Central India collection ... | | 97 | |
| Duplicates of grasses collected by Dr. Lawson at Ootacamund ... ... ... ... | | 45 | |
| | | | 6,311 |
| Royal Botanic Garden, St. Petersburgh; Central Asian plants of Przewalski's and Potanin's journeys ... ... | | | 1,150 |
| Baron Von Mueller, K.C.M.G., F.R.S., Melbourne, Australia ... | | | 761 |
| Mr. Ridley, Botanic Garden, Singapore ... ... | | | 845 |
| Dr. Trimen, F.R.S., Botanic Garden, Peradeniya ... ... | | | 14 |
| Mr. C. Maries, Gwalior ... ... ... ... | | | 126 |
| Mr. J. S. Gamble, Dehra Dun ... ... ... | | | 83 |
| Dr. Barclay, Simla ... ... ... ... | | | 22 |
| Dr. Leslie's Burma collectors— | | | |
| Mr. Cole at Yeu ... ... ... ... | | 50 | |
| Mr. Cooper at Bernardmyo ... ... ... | | 90 | |
| | | | 140 |
| Dr. Watt (duplicate *Labiatæ*) ... ... ... | | | 24 |
| Mr. Talbot, Forest Department, South Canara ... ... | | | 55 |
| Mr. Lace's Beluchistan plants ... ... ... | | | 450 |
| From the Saharanpur Herbarium— | | | |
| Plants collected by Lieutenant Hunter on West Punjab Frontier ... ... ... ... | | 99 | |
| Ditto *Labiatæ* (duplicates) and a few Central Indian plants ... ... ... ... | | 76 | |
| | | | 175 |
| Mr. Curtis, Forest Department, Penang ... ... | | | 395 |
| Mr. Wray, Perak ... ... ... ... | | | 853 |
| Mr. Pringle (Mexican plants) ... ... ... | | | 683 |
| Mr. G. Mann, Shillong (5 sets of bamboos, each 186 species) ... | | 930 | |
| Mr. G. Mann, Magnoliaceæ, etc. ... ... ... | | 354 | |
| | | | 1,284 |
| Mr. W. W. Waine, Assistant Conservator of Forests, Sikkim ... | | | 21 |
| Mr. S. E. Peal, Sibsagar ... ... ... | | | 210 |
| General Collett, C.B., Shillong ... ... ... | | | 304 |
| General Gatacre, C.B., Shan States ... ... ... | | | 127 |
| Garden collectors:— | | | |
| Dr. King; Andamans' journey ... ... ... | | 690 | |
| Ditto; Khasia do. ... ... ... | | 270 | |
| | | | 960 |
| Dr. Prain; Great Coco journey ... ... ... | | | 1,288 |
| Mr. E. H. Man, Andamans, about ... ... | | | 1,800 |
| Mr. Prazer ... ... ... ... | | | 350 |
| Abdool Hok ... ... ... ... | | | 1,100 |
| Babullah (with Lieutenant Colomb) ... ... | | | 200 |
| Mr. G. Mann's Khasia collectors about ... ... | | | 500 |
| Mr. G. Gammie, Sikkim plants ... ... ... | | | 585 |
| Total ... | | | 20,816 |

G. KING, M.B., *Brigade-Surgeon,*

*Superintendent, Royal Botanic Garden, Calcutta.*

R. D'R —Reg. No. 1118J—340—4-6-91.

FINANCIAL DEPARTMENT.

MISCELLANEOUS.

No. 2969.

DARJEELING, 18TH JUNE 1891.

## RESOLUTION.

READ—

The Annual Report of the Botanic Garden, Calcutta, for the year 1890-91.

The Report for the year shows that steady progress has been made in improving the Botanic Garden, not only as a scientific centre of the highest value to all botanical students, but also as a pleasurable and instructive resort to the public. More than 20,000 specimens were added to the Herbarium, illustrating the Flora of regions so widely removed as Central Asia, Australia, Assam, Perak, the Shan States, the Khasi Hills, the Andaman Islands, and the Great Coco Island. To the contributors of these specimens, Messrs. Mann, Lace, Gamble, Curtis, Ridley, S. Peal, and L. Wray, Generals Collett and Gatacre, and Baron von Muller, the thanks of Government are due. Arrangements were also made for continuing the work of collection in Assam, Upper Burma, and the Andamans.

2. A third volume was added to the interesting series of garden annals, containing monographs by Dr. King and Dr. Prain on certain Indian and Indo-Malayan species. Unfortunately, however, owing to unavoidable delays, it was found impossible to publish the volume within the year. Both the Superintendent and the Curator of the Herbarium also contributed valuable papers on botanical subjects to the Journal of the Asiatic Society.

3. The Lloyd Botanic Garden in Darjeeling, which is under Dr. King's supervision, is reported to be in good order Under recent arrangements the Curator of this garden is charged with the task of improving the station of Darjeeling by planting and looking after young trees. In course of time it is hoped that the damage done in past years by the wanton destruction of fine trees may be in some measure repaired.

4. The thanks of the Lieutenant-Governor are due to Dr. King, the Superintendent, and Dr. Prain, the Curator of the Herbarium, for the successful administration of the garden during the year.

ORDER.—Ordered that a copy of this Resolution, and of the Report, be submitted to the Government of India, in the Revenue and Agricultural Department, for information.

Ordered also that a copy of this Resolution be forwarded to the Superintendent of the Botanic Garden for information.

By order of the Lieutenant-Governor of Bengal,

H. H. RISLEY,

*Offg. Secy. to the Govt. of Bengal.*

No. 2970.

COPY forwarded to the Superintendent of the Royal Botanic Garden, Calcutta, for information.

By order of the Lieutenant-Governor of Bengal,

H. C. STREATFEILD,

*Under-Secretary to the Government of Bengal.*

CALCUTTA,
*The 26th June* 1891.

E. J. H.—Reg. No. 2159C.